



# CALAVERAS COUNTY ORAL HEALTH IMPROVEMENT PLAN

This is an evidence-based Oral Health Improvement Plan that has targeted approach to reduce the barriers to oral health in Calaveras County. The report states the local objectives for improving oral health and strategies to achieve these objectives.

**Health and Human  
Services Agency,  
Calaveras Public  
Health Division,  
Calaveras Oral  
Health Program**

# Calaveras County Oral Health Improvement Plan

## Calaveras Oral Health Program

Written by:

Kelsey Holmes

Health and Human Services Agency,  
Public Health Division  
700 Mountain Ranch Road  
San Andreas, CA 95249  
209-754-6460

Acknowledgements:

This publication was made possible by Proposition 56, the California Healthcare, Research and Prevention Tobacco Tax Act of 2016.

A special thanks to the Oral Health Task Force of Calaveras County.

Thank you to Michael Magana and Colleen Rodriguez at Calaveras Public Health for their support and guidance.

# Table of Contents

Executive Summary ..... 3

Background..... 5

Methods ..... 11

Guiding Principles ..... 12

Goals and Objectives ..... 14

Strategies..... 15

Target Demographics..... 17

Partners ..... 18

References..... 19

DRAFT

# Executive Summary

---

Oral health is important to a person's overall health.<sup>1</sup> Poor oral health can impact other areas of the body.<sup>1</sup> Health conditions that are not specific to the mouth also have an effect on oral health.<sup>1</sup> Oral health is important for vital practices like eating, drinking, speaking and smiling.<sup>1</sup> A community with poor oral health can have increased expenses due to higher dental costs, loss of productivity, poor nutrition and a drop in school and work attendance.<sup>1</sup>

A Community Needs Assessment was conducted to determine the oral health status in Calaveras County. The assessment showed that there are many positive oral health practices and behaviors that are carried out every day in Calaveras, however there is still room for improvement. Everyone in Calaveras County should have the chance to be as healthy as possible, especially when it comes to their oral health. The data showed that were many people working to maintain their oral health. Nevertheless, numerous other residents reported barriers to preserving their oral health. Education was found to be a need, not only to increase oral health literacy, but also to improve the cultural importance placed on oral health.<sup>15</sup> It was shown that activities to help eliminate the barriers to dental care would also be crucial be to improving the health of the county.<sup>15</sup> In addition, holistic approaches that consider the multifaceted needs of the community, including reducing risk factors for oral health, were also found to be a essential in Calaveras.<sup>15</sup>

The Oral Health Improvement Plan was written in collaboration with Oral Health Task Force members. The information in the needs assessment was used as evidence to provide the factors that were then prioritized by task force members. The prioritized factors were used to brainstorm what areas and activities the Calaveras Oral Health Program should focus on to make the most amount of impact in the community while still upholding the guiding principles.

The Calaveras Oral Health Program will use the guiding principles described in the Oral Health Improvement Plan to design program activities. The goals and objectives of the program were also determined and outlined in the plan. The program will focus on four major areas: school oral health programs, risk factor prevention and protective factor promotion, community awareness of oral health through education and community collaborations that address the barriers of oral health. The strategies identified to achieve the objectives include increasing efforts in education, access, integration and evaluation. The three target demographics, children, low-income communities and seniors, as determined from the Community Needs Assessment are also listed in the plan as they will also help to determine the audience of the program activities.

A Work Plan that outlines the program activities and deliverables will also be written as a complement to this improvement plan. An Evaluation Plan will also be completed to measure the impact of the program and the activities. Together the Oral Health Improvement Plan, Work Plan and the Evaluation Plan will guide the Calaveras Oral Health Program for the next four years.



Welcome to  
**CALAVERAS  
COUNTY**  
Chamber of Commerce  
Visitors Bureau

**Mission:**

**Calaveras County Government: Serving, strengthening, and supporting our community.**

**Vision:**

**Calaveras County: A community of agricultural, historic, and recreational abundance where residents and visitors can enjoy safety and prosperity.**

**Values:**

**Integrity: We hold ourselves to high ethical standards.**

**Balance: We value our heritage while striving for continuous improvement.**

**Resilience: We respond creatively to challenges.**

**Service: We serve the public with hard work, civility, and respect.**

# Background

## Oral Health Overview

Good oral health is essential for overall health and wellbeing.<sup>1</sup> Oral health has been linked to other health issues such as diet, heart disease, diabetes and cancers as well as behaviors like speaking, self-esteem, school performance and work and school attendance.<sup>2</sup> Despite the importance of maintaining good oral health, the majority of Americans reported struggling with preserving their oral health.<sup>2</sup> One of the most common chronic diseases in the United States was found to be tooth decay (carries or cavities).<sup>2</sup> Eighty percent of Americans stated having had at least one cavity by age 34 and every year 40% of Americans reported pain in their mouths.<sup>2</sup> This resulted in an average of \$124 billion annually spent on dental care and cost the nation more than \$6 billion in productivity loss.<sup>2</sup> Many oral health issues are 100% preventable, but in 2007, less than 45% of Americans visited the dentist in the last year, a statistic that has not improved for ten years.<sup>3</sup> Many factors are at play when looking at oral health including issues such as cavities, tooth loss, periodontal disease and oral cancers. There are social determinants of health that are factors when looking at oral health, some examples include: income, race/ethnicity, gender and age. There are also some behaviors that are harmful to a person's oral health like tobacco and sugar intake, but many behaviors can have positive effects on oral health like using fluoride and regular dental care.

## Calaveras County Overview



The map shows the different communities of Calaveras County.

Calaveras County is located in California, nestled between the Sacramento Valley and the Sierra Mountains in the heart of the gold country.<sup>4</sup> It was founded in 1850 and was one of the 27 original California counties.<sup>4</sup> Many people relocated to Calaveras County as part of the California Gold Rush with over nine million ounces of gold mined from the county.<sup>4</sup> In 1865, Mark Twain wrote a story entitled 'The Celebrated Jumping Frogs of Calaveras County' - making the county world famous.<sup>4</sup> The 2016 census reported over 45,000 people living in Calaveras County.<sup>5</sup> The age distribution included about 4% of the population under 5 years of age, with 17% of the population under 18 years old and an average age of 49.2 years old.<sup>5,6</sup> More than a quarter (27%) of the population was over the age of 65.<sup>5</sup> Ninety-two percent of the county

identified as Whites, while African Americans represented 1%, Asians 2%, American Indians/ Alaskan-Natives 2%, Hispanics or Latinos 12% and 4% identified as two or more races.<sup>5</sup> The census showed that about 6% of the population was born outside of the US.<sup>5</sup> Over 4,500 veterans reported living in Calaveras County.<sup>5</sup> On average there were two to three people in a household and the majority of the population



(93%) spoke English at home.<sup>5</sup> Housing in Calaveras became an issue after The Butte Fire, a wildfire that destroyed 921 structures.<sup>23</sup> Only 1.8% of houses for rent were reported to be not rented.<sup>6</sup> Home owners were found to be in the majority; 76.9 % of people owned their homes and 23.1% rented their homes.<sup>6</sup> Calaveras County showed an above average high school graduation rate of 90% and 20% of the population received higher learning degrees.<sup>5</sup> The medium household income was reported at \$53,502 and the annual per capita income was \$30,577.<sup>7</sup> The unemployment rate was found to be 5.6% compared to the state rate of 5.4%.<sup>7</sup> In Calaveras County, the percent of people facing poverty was reported to be 13% of the population<sup>5</sup>; 20% of children were shown to live in poverty and 60% were eligible for the free or reduced school lunch program.<sup>7</sup> Calaveras County has historically voted for Republican candidates<sup>8</sup> and is governed by the Board of Supervisors who are elected by the citizens of their district.<sup>9</sup> Calaveras County found that 13% of residents had poor or fair health compared to 18% of Californians.<sup>7</sup> Poor physical health days were reported on average 3.4 days out of the month and 3.7 poor mental health days compared to the state rate of 3.5 days of poor physical and mental health.<sup>7</sup> The diabetes prevalence in Calaveras County was reported at a rate of 10% which was only slightly higher than the state rate of 9%.<sup>7</sup> The reported adult obesity rate was 26% of the population versus 23% in California.<sup>7</sup> Fourteen percent of households reported food insecurity in Calaveras County, which was slightly higher than the state average of 13%.<sup>7</sup> Fourteen percent of people over the age of 65 reported having a disability and 6% of people over the age of 65 stated they were without health insurance.<sup>5</sup> The adult smoking rate in Calaveras County was found to be 12% compared to the state rate of 11%.<sup>7</sup> However, the percentages of youth who use tobacco in Calaveras was reported at 23% compared to 14% at the state level.<sup>10</sup> Smoking was shown to cost the county \$8.6 million every year.<sup>10</sup>

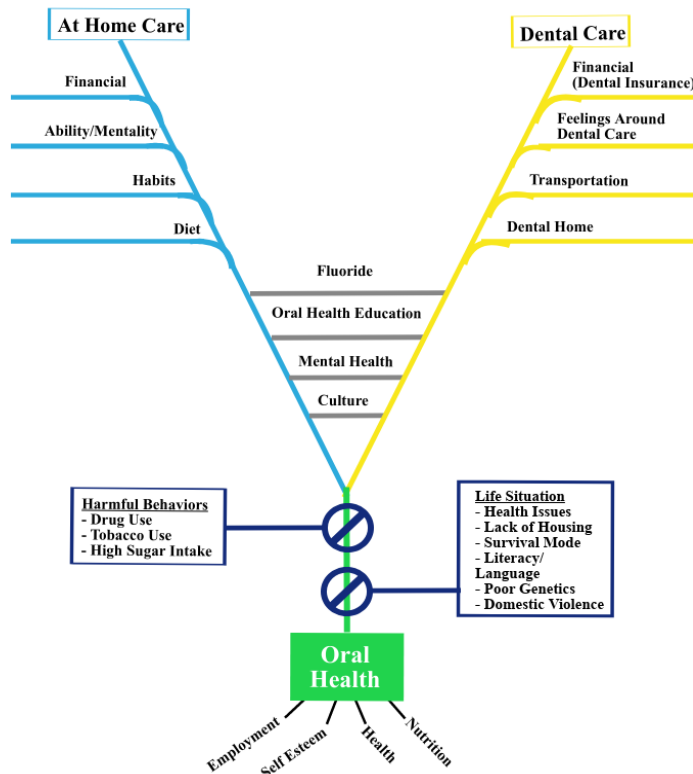
## Oral Health in Calaveras

Calaveras County ranked 16<sup>th</sup> out of 58 counties in California for age adjusted rate of preventable dental emergencies.<sup>1</sup> The rate of non-traumatic dental conditions that resulted in emergency room visits in Calaveras County was 745 per 100,000 which was more than double the state rate of 353.3.<sup>11</sup> Emergency room visits that are due to preventable dental issues show a pattern of delayed dental treatment in the community and exponential increases the cost of dental care. In Calaveras County, the percentage of annual dental visits for Medi-Cal beneficiaries was 30% in children and 18% in adults.<sup>12</sup> The Kindergarten Report from the System for California Oral Health Reporting showed that in Calaveras County in 2017, that of the 222 assessed, 44 children showed untreated dental carriers (which was a rate of 20%).<sup>13</sup> The county reported one dentist for every 2,260 people compared to the state coverage of 1:1,210.<sup>7</sup> The County of Calaveras does not have fluoridated water and the county reported providing water to 13,080 customers (29% of the population).<sup>22</sup>

The Community Needs Assessment was conducted by Calaveras Public Health as part of the Calaveras Oral Health Program. Qualitative and quantitative data was collected to shed a light on the factors that influenced oral health in Calaveras. Oral health literacy, access to dental care and the culture around oral health were identified as the most influential factors that impact a person's oral health. There were also many other secondary factors that were shown to play a role in oral health, highlighting that oral health is not independent of the rest of the body or other life issues. These factors from the qualitative data collected were used to make the pathway and framework below<sup>15</sup>.

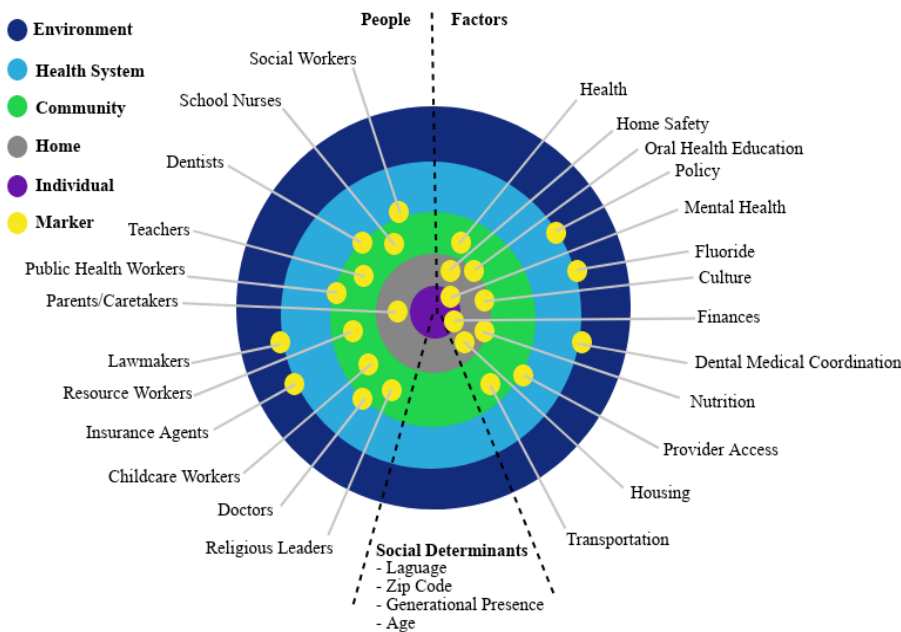
## Oral Health Influencers Pathway in Calaveras County

The pathway shows the influences over a community members' oral health at the individual level. The yellow line represents factors that were specific to dental care and the light blue line shows factors that occurred at home. The navy blue lines are inhibiting elements that negatively affected a person's oral health. Both the yellow and the light blue factors were stated to be required for oral health.



## The Social Ecological Influencers on Oral Health in Calaveras County

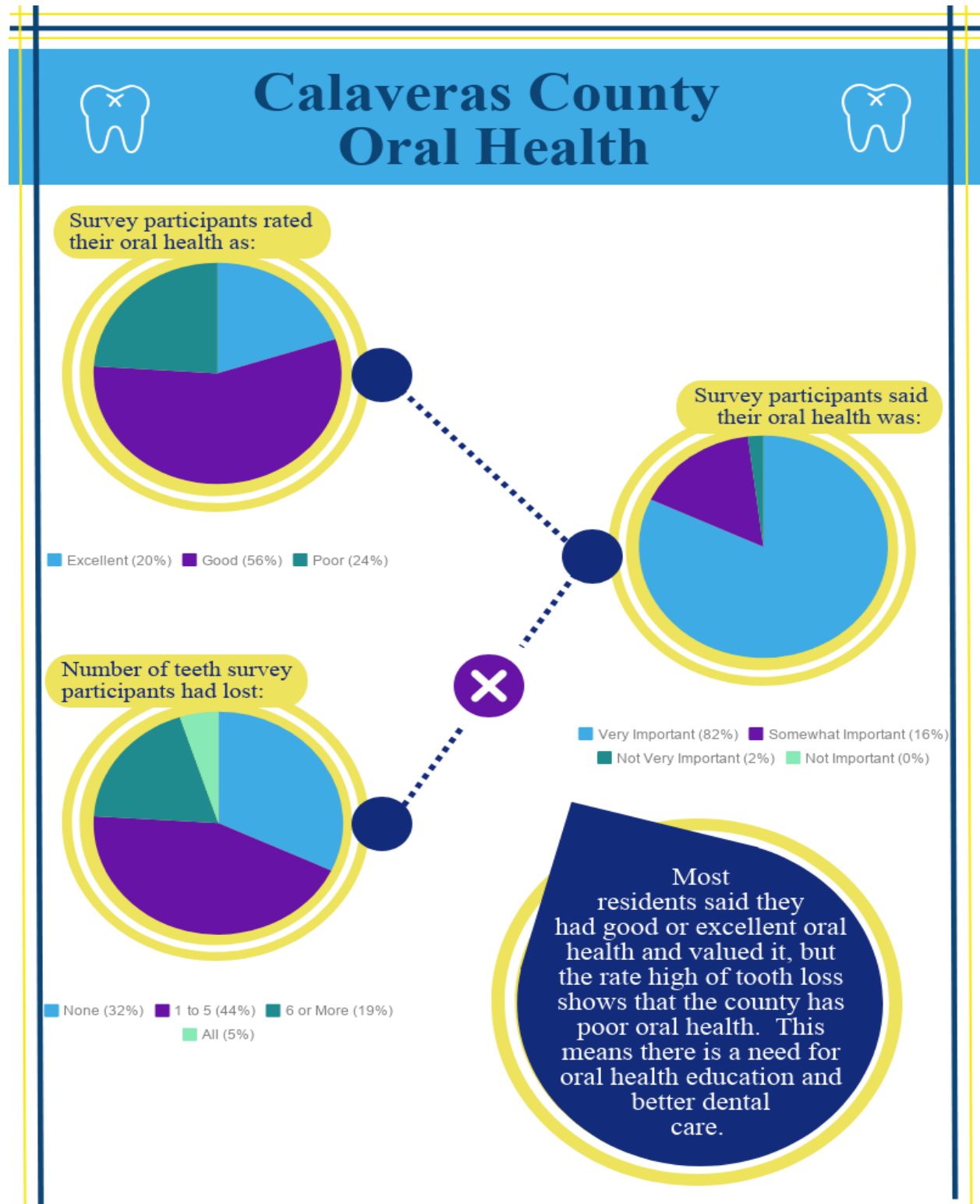
The factors that influence oral health are present at the various levels of environment, health system, community, at home and individual. All of these levels are important to keeping a community healthy. It is important to coordinate oral health improvement approaches at all levels because they are all dependent on one another. The oral health needs of the community are numerous, but patterns of needs were found in oral health education, access to care and cultural perspectives of oral health.<sup>15</sup>



This framework is based off of the Socio-Ecological Framework. It shows the factors, people and social determinants of health that impact oral health beyond the individual level. It is important to consider the outside systems at play when looking at oral health. This includes the people who are part of ensuring the oral health of the community. The social determinates of oral health come from the primary data.



A comparison of the perspective that people have of their oral health, the importance they place on it and their actual state of oral health reveals inconsistent information. Most people feel as though they have good oral health and they highly value it, but there is an alarming rate of tooth loss and therefore poor oral health in the county.



The quantitative data asked questions about topics that were raised in the qualitative data to quantify the number of people facing certain issues. The quantitative data was representative of the county, measured through demographic questions. Four demographic questions including: zip code, race/ethnicity, age and income level were asked and then compared to census data<sup>13</sup> to determine if the survey was representative of the population of the county. While less than 3% of the population was surveyed, it was representative of the demographics of the county, making it extrapolatable to the rest of the population.<sup>15</sup>

The data showed many positive oral health behaviors that can be reinforced by the Oral Health Program. Eight-two percent of people thought that oral health was very important and 231 people felt as though they did well in maintaining their oral health. Sixty-six percent of people went to the dentist in the last year and 56% received preventative treatment. Of those who went to the dentist, 64% of people felt as though they received good or excellent care. Seventy-three percent of people had dental insurance. Residents sustained their oral health through positive behaviors: 70% of people brushed their teeth the recommended amount, 55% of participants flossed the recommended amount and 68% used fluoride. Participants maintained their oral health by avoiding harmful behaviors: 51% of people had never used tobacco and 35% of people did not consume sugary drinks. Also, 53% of participants reported that their child had not had a cavity and 32% of participants had not lost any teeth.<sup>15</sup>

However, oral health is something that every residents deserves to have an opportunity to have and while there were many people working to maintain their oral health, there were also numerous other residents who were not able to maintain their oral health. Twenty-four percent of participants stated they had poor oral health. Dental care was too expensive for 97 people and 24% of people did not have dental insurance. Thirty-two percent of participants did not get care they needed in the last year and 25% had not been to the dentist in the last year. Residents had to travel a long way to get to dental care; 47% of people drove more than 30 minutes. At home care can be improved with 30% of people were not brushing the minimum requirements and 51% of people needed to floss more. Tobacco use was very high in the county with 25% of people reported using tobacco. Twenty-one percent of people drank at least one sugary drink a day and 14% of people avoided fluoride. However, the most alarming statistics is that 68% of people had experienced tooth loss.<sup>15</sup>

Oral health was said to be important to county residents, yet many people struggled with maintaining their oral health due to expense, transportation to dental care, the lack of affordable dental care and other essential priorities like housing and health concerns<sup>15</sup> Calaveras County residents expressed a high oral health literacy rate, but their behaviors did not mirror their perceived knowledge of both at home care and dental care.<sup>15</sup> Also, other behaviors which are detrimental to oral health, like tobacco use, sugary drink consumption and cannabis use were seen at high rates in the county.<sup>15</sup> While helpful behaviors like fluoride use was present, there was also some opposition against it<sup>15</sup>. Many people went without dental care due to the challenges of getting to and paying for dental care.<sup>15</sup> Oral health habit induction in children can also be improved. Tooth loss was high in the country, indicating that the overall oral health of residents was poor.<sup>15</sup> In general, oral health education that addresses at home oral health practices and dental care is needed, not only to increase oral health literacy, but also to improve the cultural importance placed on oral health. Activities that help to eliminate the barriers to oral health are also needed to help improve the overall oral health of the community.

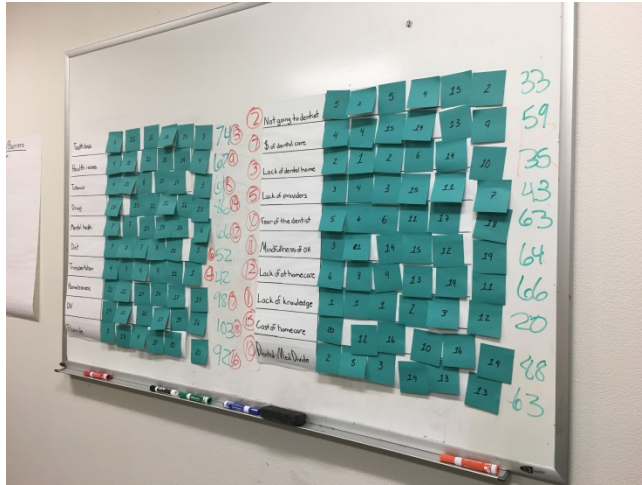
## Discussion

The qualitative and quantitative data both demonstrated the need for more oral health education, better access to dental care and a culture that has the capability to value oral health. Oral health education not only refers to the knowledge needed to care for oral health, but also the harmful and beneficial behaviors that indirectly impact oral health. The data showed tobacco use, fluoride and nutrition as important factors to educate the community on to improve their oral health knowledge. The data also showed the barriers in seeking and receiving dental care and the repercussions for a community member when they do not receive care. A sense of hopelessness around oral care was expressed due to the inability to maintain oral health because of a lack of knowledge and access to care. The asset mapping of community resources showed a similar lack of resources. However, a strong sense of community was seen in the number of community organizations and from the key informant interviews.

Tooth loss rates can be used to show the status of oral health in a community. The reported rate of tooth loss of the state was 36% in adults ages 18-64 and 68% in people over the age of 65.<sup>3</sup> The primary data showed tooth loss in 68% of people ages 14 and older.<sup>15</sup> This indicates a much higher rate of tooth loss in the county than in the state for adults under 65. The major causes of tooth loss was gum disease and tooth decay<sup>3</sup>, both of which require at home care and dental care. Cavities in children ages 0-14 were reported in 44% of children in the primary data.<sup>15</sup> The state reported 54% of kindergarteners had cavities and 70% of third graders.<sup>1</sup> While these statistics are not directly comparable, it would suggest that a fewer percent of children in Calaveras County had cavities than in California. Nevertheless, 20% of kindergarteners had untreated cavities in Calaveras, which did match the state rate.<sup>13</sup> The high rate of tooth loss in the county indicates poor oral health and a need for oral health improvement efforts.

It has been determined that Calaveras County has room for improvement when it comes to oral health. Continuing on the same trajectory will cost the county a lot of money in increased dental costs, loss of productivity, poor nutrition and a drop in school and work attendance. Oral health is not only an indicator of overall health, but poor oral health can also result in a decrease in overall health. It is important to address the oral health of the community in order to improve both the oral health and overall health of the community, but also for the economic repercussions.

## Methods



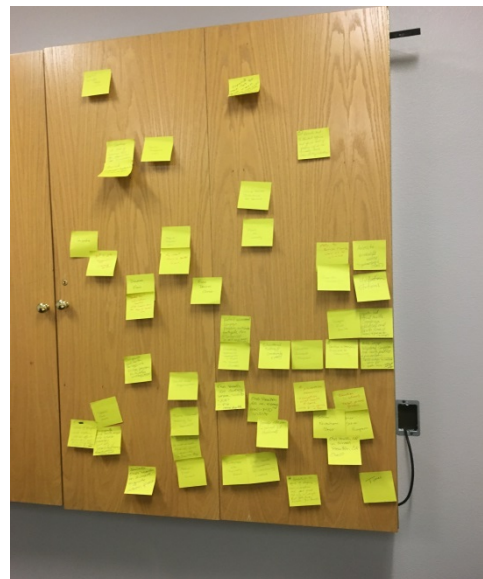
The picture above was taken during the prioritization activity of the oral health planning meeting.

The Calaveras Oral Health Improvement Plan development was a community-driven process. The Calaveras Oral Health Program worked with the Oral Health Task Force which is comprised of community members, oral health professionals and community workers that are motivated to address the issues of oral health. To determine the status of oral health in Calaveras County, the Calaveras Oral Health Program collected and analyzed secondary and primary data. The existing secondary data showed little information that was specific to the county. The primary data was collected through both qualitative and quantitative methods. The data from the assessment was analyzed and areas for

improvement, factors that influenced oral health and target demographics were identified along with many other aspects surrounding oral health in Calaveras.

The identified areas of improvement and factors of influence were used by the Oral Health Task Force to prioritize the Calaveras Oral Health Program focus areas. Using the information from the Community Needs Assessment as supporting evidence, the Oral Health Task Force decided what should be the focus of the plan. Participants first prioritized the identified areas of improvement and factors of influence. Task Force members used the knowledge gain from the needs assessment and their experience from working in the community to decide the main focus of the Oral Health Improvement Plan. A prioritization activity was completed to determine what areas of need should be the focus of the Oral Health Program. After the areas of focus were identified, participants then brainstormed activities to address the major priorities. The target demographics were also discussed with the group to make sure that they agreed with the identified target demographics that came out of the needs assessment. Objectives and strategies were also identified to compliment and guide the identified focus areas. The Oral Health Improvement Plan was then written to highlight the direction, principles and goal of the Calaveras Oral Health Program.

The picture below was taken during the oral health planning meeting during a brainstorming session.



A Work Plan will be developed to outline the activities and deliverables of the program. An Evaluation Plan will also be developed to measure the effectiveness of the Calaveras Oral Health Program. The Work Plan and the Evaluation Plan will complement the Oral Health Improvement Plan.

## Guiding Principles

### Health Equity

Health equity is an approach that focuses on decreasing factors that create health disparities due to socioeconomic factors. The aim is to ensure that everyone, regardless of their race, age, zip code, education or income, is able to maintain a healthy status. Creating a program that incorporates health equitable principles is important because it will address marginalized populations that have higher rates of poor oral health. By taking a health equitable approach, the Calaveras Oral Health Program will be able to identify, target and reduce factors that lead to oral health disparities. To ensure that health equity is incorporated into all activities, performance measures that are designed to measure health disparities and as well as health equity impact tools will be used in the design and implementation of all program activities.

### Prevention Promotion

Most oral health issues are 100% preventable, yet the majority of Americans have oral health issues<sup>2,3</sup>. Prevention efforts are economically beneficial because they not only prevent the need for expensive treatment, but also prevent the need for replacement treatment for the rest of the patient's life. Some oral health issues are contagious and through prevention methods, further spread can be decreased, which decreases those affected. In addition, preventing oral health problems also prevents other health issues that are a result of poor oral health. In order to achieve and maintain the status of oral health, prevention is essential at both an individual level and a community level. A focus on prevention incorporates at home practices and dental care. A prevention approach also includes dental treatment because if an issue is left untreated, it can spread to other health areas and cause more harm. The Calaveras Oral Health Program will prioritize prevention in the program activities by increasing the accessibility to preventative dental care and treatment and educating the community on oral health prevention.

### Wellness Approach

A wellness approach incorporates all of the factors that influence oral health. There are many primary and secondary factors that impact oral health. An example of a primary factor would be if a person does not know how to brush their teeth properly and they develop poor oral health. A secondary factor could be if a person does not have transportation to get to the dentist. Primary factors are more directly associated with oral health, but the secondary factors are just as important. The Calaveras Oral Health Program will work to address both primary and secondary factors by taking a holistic approach to reducing barriers to oral health. A wellness approach will be achieved by including non-traditional agencies and partners when working in the community and collaborating with other programs to address secondary factors.

### Evidence-based

Using evidence from past projects and creditable research is essential to the success of a program<sup>17</sup>. By taking ideas, methods and tools that have been proven to be successful in similar settings and applying them to Oral Health in Calaveras, the program will be using an approach

that has past proven success verses creating approaches and hoping it will be successful. Using the knowledge gained through research and Public Health Professionals and tailoring it to the needs of the community, gives the program the advantage of using a plethora of information gathered by past initiatives to make informed decisions based on previous success and the particular challenges that Calaveras County faces. The Calaveras Oral Health Program will utilize creditable research, best practices and the Community Needs Assessment to make informed decisions.



## Sustainability

Sustainability refers to the duration in which an activity or a program can be in place and still be effective. Important factors to consider when planning for sustainability include: the maintenance of the achieved health impacts, the community buy in and the institutionalization of the program and the capacity of the community to continue the program<sup>18</sup>. Programmatic approaches and strategies that lend more towards a long-term program are incorporated into three assets: project design and implementation, project management and the community influence<sup>18</sup>. A sustainable approach includes looking at the program activities and evaluating the lasting effects of knowledge or information taught, the long-term effects of positive behavior change and the robustness of any program development. By partnering with a diversity of community agencies and organizations and integrating oral health into their programs, the Calaveras Oral Health Program will increase the longevity of the oral health impact beyond the Calaveras Oral Health Program, making it more sustainable.



# Goals and Objectives

**1**

## **Implement school oral health programs.**

1. Objective one: Increase the oral health literacy of Calaveras County students through oral health education lessons where 2,000 students show an average increase in knowledge by 2022.
2. Objective two: Improve access to preventative care for school students by implementing a school screening program that includes sealant and fluoride applications where 200 students receive preventative care by 2022.
3. Objective three: Increase the number of kindergarten assessment submission through collaboration with the school districts by 5% by 2022.

**2**

## **Educate the community on common risk factors for oral disease and chronic disease including tobacco and sugar and promote protective factors that will reduce disease burden.**

1. Objective one: Increase the use of California's Smokers Hotline in Calaveras by 30% by 2022.
2. Objective two: Decrease Calaveras County's consumption of sugary drinks by 5% by 2022.
3. Objective three: Increase fluoride use in Calaveras County members by 5% by 2022.

**3**

## **Create community awareness around oral health through education and community engagement strategies.**

1. Objective one: Increase the oral health literacy of Calaveras County members through oral health education events where 4,000 members show an average increase in knowledge by 30% by 2022.
2. Objective two: Increase oral health at home prevention practices in adults including: tooth brushing and flossing by 10% and 20% respectively by 2022.

**4**

## **Collaborate with dental providers and community organizations to address the barriers of receiving dental care.**

1. Objective one: Improve access to dental care shown by an increase in annual dental visits by 10% by 2022.
2. Objective two: Integrate oral health into overall health by forging community partnerships to decrease emergency room visits due to preventable oral health issues by 5% by 2022.

# Strategies

## Education

In Calaveras County, many people felt as though they knew how to keep their mouths healthy, but further inquire showed that this was a false assumption for many people. Educating Calaveras community members on the importance of oral health and how to properly maintain one's oral health will empower the community through knowledge to become guardians of their own oral health.

- a. Develop educational oral health messages and curriculums that are tailored to the target demographic audience.
- b. Coordinate with community organizations and schools to institute an oral health education schedule.
- c. Conduct education session to teach community members about oral health.
- d. Establish an oral health education program that utilizes champions to educate the community on oral health.

## Access

Access to dental care was found to be a major issue in Calaveras County.<sup>15</sup> There were many factors that impeded a resident's ability to get care that included: cost, transportation, fear of the dentist and lack of providers.<sup>15</sup> Working to decrease these barriers to care will help increase the number of people receiving care.

- a. Forge partnerships with community organizations to address the barriers to care through collaborative efforts.
- b. Provide increased learning opportunities for dental providers to address barriers to care. Increase dental professionals' knowledge of how to address harmful behaviors with patients and supply resources to for providers to distribute to patients.

## Integration

In Calaveras County, many people do not prioritize or recognize the importance of oral health.<sup>15</sup> The aim is to increase the mindfulness around oral health by repeatedly exposing community members to the topic and best practices to from many different approaches. The increased exposure will integrate oral health into the community, culture and medical environment to increase community awareness of oral health.

- a. Collaborate with medical providers to increase the emphasis on oral health and the linkage between overall health and oral health. Unite medical and dental professionals to create a more streamline approach to collaborative care.
- b. Make oral health more of a cultural priority by using motivated community champions to educate and promote oral health in the community. Also, increase the presence of oral health in the community through an educational campaign that draws more attention to oral health by advertising best practices and notifying community leaders about the status of oral health in the county.

- c. Partner with other health programs to incorporate oral health into overall health. Work with other health and community programs to develop materials and lessons that integrate oral health care into education opportunities. Also, work with other health programs on topics of common interest to promote health behaviors like tobacco prevention and healthy diet encouragement.

## Evaluation

In order to assess the efficacy of the efforts and activities of the Calaveras Oral Health Program, they need to be measured. By monitoring and evaluating the progress and impact of the program trends in the community will be tracked. The monitoring is also helpful when looking at specific activities and how they can be improved or scaled up.

- a. Develop and implement an evaluation plan that helps to track and monitor the efforts of the Oral Health Program and the oral health of the county. This will include identifying currently tracked data and who is involved in the reporting as well as creating a new system to track and report indicators that will be measured by the program and assigning people responsible.
- b. Ensure that any new resources introduced to the community through the oral health program are self-sufficient after four years. Also, any additional funding sources found by the program will have a sustainability plan incorporated into the implementation to ensure that the funding and the resource will become community driven after four years.

# Target Demographics

## Children

Children were chosen as a target demographic because they are establishing their health behaviors and are great candidates to develop healthy behaviors versus having to relearn and reestablish a new behavior to correct an unhealthy behavior. Working with young children who do not have permanent teeth yet is a great opportunity to correct any issues before they are left with lifelong oral health issues. Also, investing in children through education and behavior induction aims to teach them good habits that will continue on for the remainder of their life, which is hopefully longer than an adult's lifespan, and will see positive effects for years to come. When working to instill good oral health knowledge and practices in children it is also vital to work with their parent/caregiver to reinforce the behaviors and to help break any generationally cyclical detrimental behaviors. In addition to the magnitudinal effects of working to improve children's oral health, Calaveras County has room for improvement; 44% of children had cavities and 60% of children had not been to the dentist by age two.<sup>15</sup> Targeting children and those who work with and care for children for oral health education and good habit development will have long-term positive effects in the county.

## Low-Income communities

Low income communities struggle disproportionately with transportation, diet, homelessness, health issues, drug use, tobacco use, and mental health which were all factors that were shown to affect oral health in Calaveras.<sup>15,16</sup> Also, low income communities are most affected by the cost of dental care, which was determined to be the biggest deterrent to dental care in Calaveras County.<sup>15</sup> In Calaveras County, of those who needed dental care in the past year, but did not receive it, 62% were low income residents.<sup>15</sup> It was also shown that the cultural perspective around oral health was very important in Calaveras County and that many people are either taught or not taught how to maintain their oral health at home.<sup>15</sup> By targeting the communities that in previous generations did not have the option of maintaining their oral health and therefore have not received the proper education in which to preserve it, the generational effect of oral health education, or lack thereof, can be disrupted and influenced to eliminate poverty and the culture around it as a determinant of oral health.

## Seniors

Seniors are more susceptible to health issues that affect oral health and rates of oral health issues have increased in the senior population.<sup>19</sup> Also, it was reported that 40% of American adults aged 65 and older had not visited a dentist in the past year<sup>20</sup> and an estimated 20% of adults 65 years of age or older had untreated tooth decay.<sup>21</sup> Seniors were chosen as a target demographic because they comprised a large part of the population of Calaveras; 27% of the population reported that they were 65 years of age or older<sup>15</sup>. Also, it was found that seniors have very few options for dental insurance.<sup>15</sup> Many seniors are retired and therefore do not receive dental insurance through an employer and there is a lack of government programs for dental care for seniors.<sup>15</sup> Oral health practices have changed over the years<sup>22</sup> and working with a senior population gives the Calaveras Oral Health Program an opportunity to keep the senior population up to date on oral health.

# Partners

---

## Organizations, Programs and People Involved in the Oral Health Task Force for Calaveras County

1. Medi-Cal dental services through Delta Dental representation
  2. School nurses
  3. Calaveras Public Health
  4. Local dentists
  5. School district leaders
  6. Calaveras County Children's Dental Project
  7. The Resource Connection (local non-profit)
  8. Head Start
  9. First 5
  10. Valley Mountain Regional Center (VMRC)
  11. Maternal, Child, Adolescent Health (MCAH)
  12. Childhood Lead Poisoning Prevention Program
  13. Mark Twain Health Care
  14. Community nurses
  15. Calaveras Communicable Disease Program
  16. Community members
- 

The Oral Health Task Force is comprised of many key community members that are passionate about the oral health of Calaveras County. The list above shows the reach of the task force and the different roles and representation of the members.

## References

1. American Dental Association. (n.d.). California's Oral Health Care System. Retrieved from <https://www.ada.org/en/science-research/health-policy-institute/oral-health-care-system/California-facts>
2. Centers for Disease Control and Prevention. (2015, October 08). Oral Health Basics. Retrieved from <https://www.cdc.gov/oralhealth/basics/index.html>
3. Gadgil, M., Jackson, R., Rosenblatt, N., Aleemuddin, A., Peck, C., & Bates, J. (n.d.). *Status of Oral Health in California: Oral Disease Burden and Prevention* (Rep.) (M. N. Rodgers, Ed.). doi:<https://www.ada.org/en/science-research/health-policy-institute/oral-health-care-system/california-facts>
4. Calaveras County Chamber of Commerce. (n.d.). About Calaveras. Retrieved from <https://calaveras.org/about-calaveras/Calaveras County California>.
5. United States Census Bureau. (n.d.). U.S. Census Bureau QuickFacts: Calaveras County, California. Retrieved from <http://www.census.gov/quickfacts/fact/table/calaverascountycalifornia/PST045216>
6. <https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?src=CF>
7. Robert Wood Johnson Foundation. (2018). Health Outcomes, Overall Rankings. Retrieved from <http://www.countyhealthrankings.org/app/california/2018/rankings/calaveras/county/outcomes/overall/snapshot>
8. Calaveras County. (n.d.). Election Archives. Retrieved from <http://elections.calaverasgov.us/Results/Archive/FolderID/859>
9. Calaveras County. (2019). Calaveras County Board of Supervisors. Retrieved from <http://bos.calaverasgov.us/Supervisors>
10. Healthy Stores for a Healthy Community. (n.d.). Retrieved from <http://healthystoreshealthycommunity.com/counties/calaveras/>
11. California Health and Human Services. (n.d.). [The rate of emergency department visits for non-traumatic dental conditions (NTDCs) by county for the combined years of 2012-2016]. Unpublished raw data.
12. Department of Health Care Services Medi-Cal Dental Services Division. (2017). [Annual Dental Visit (ADV) by County]. Unpublished raw data.
13. Employee Development Department, State of California. (n.d.). [Claimants by County (all programs) - The number of individuals that certified for benefits during a specified week in the month]. Unpublished raw data. [https://www.edd.ca.gov/about\\_edd/pdf/qsui-Claimants\\_by\\_County\\_All\\_Programs\\_2018.pdf](https://www.edd.ca.gov/about_edd/pdf/qsui-Claimants_by_County_All_Programs_2018.pdf)
14. Calaveras County Water District. (n.d.). Retrieved from <http://ccwd.org/>
15. Holmes, K. (2019). Calaveras County Oral Health Community Needs Assessment (Rep.). San Andreas, CA: Health and Human Services Agency, Public Health Division.
16. Health, Income, & Poverty: Where We Are & What Could Help. (n.d.). Retrieved from <https://www.healthaffairs.org/doi/10.1377/hpb20180817.901935/full/>
17. Supporting Research and Evidence-Based Public Health Practice in State and Local Health Agencies. (n.d.). Retrieved from <https://www.apha.org/policies-and-advocacy/public-health-policy-statements/policy-database/2018/01/18/supporting-research-and-evidence-based-public-health-practice>



18. Shediak-Rizkallah, M. C., & Bone, L. R. (1998). Planning for the sustainability of community-based health programs: Conceptual frameworks and future directions for research, practice and policy. *Health Education Research*, 13(1), 87-108. doi:10.1093/her/13.1.87
19. Aging and Dental Health. (n.d.). Retrieved from <https://www.ada.org/en/member-center/oral-health-topics/aging-and-dental-health>
20. Oral Health Disparities as Determined by Selected Healthy People 2020 Oral Health Objectives for the United States, 2009–2010. (2012, August 21). Retrieved from <http://www.cdc.gov/nchs/data/databriefs/db104.htm#x2013;2010>
21. National Center for Health Statistics. (2015, May 13). Retrieved from <http://www.cdc.gov/nchs/products/databriefs/db197.htm>
22. Institute of Medicine (US) Committee on the Future of Dental Education; Field MJ, editor. Dental Education at the Crossroads: Challenges and Change. Washington (DC): National Academies Press (US); 1995. 2, Evolution of Dental Education. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK232261/>
23. California, S. O. (n.d.). California Statewide Fire Map. Retrieved from [http://cdfdata.fire.ca.gov/incidents/incidents\\_details\\_info?incident\\_id=1221](http://cdfdata.fire.ca.gov/incidents/incidents_details_info?incident_id=1221)